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10/737,103	12/15/2003	Takahiro Miyake	(70904) 60431	5510

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EXAMINER	
COLEMAN, VANESSA V	

ART UNIT	PAPER NUMBER
2627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/737,103	MIYAKE, TAKAHIRO	
	Examiner	Art Unit	
	Vanessa (Brandi) Coleman	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *15 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-14* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This action, dated April 30, 2007, is in response to Applicant's amendment, filed March 7, 2007. Claims 1-14 are pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-14 rejected under 35 U.S.C. 102(e) as being clearly anticipated by Nishi, et al., U.S. Patent Application Publication Number US 2003/0179671 (hereinafter "Nishi").

For claim 1, Nishi teaches:

> An optical pickup (optical head 104) installed in an optical disk reproducing device (see the Abstract and [0014]) for reproducing information from an optical disk by projecting a laser on the optical disk (optical disk 102), the optical disk reproducing device including: laser source power control means (laser controller 121) for controlling power of a laser source (semiconductor laser element 212) to switch operation modes between a low-power operation mode in which a single-

layer disk is reproduced or a disk is reproduced at a normal speed and a high-power operation mode in which a bi-layer disk is reproduced or a disk is reproduced at a double speed (see [0043]-[0045], [0090]-[0095] where the "low-power operation mode" limitation is met by operation of "optical recording medium B", the "high-power operation mode" limitation is met by operation of "optical recording medium A"); and attenuating means for attenuating, only in the low-power operation mode, a laser beam emitted by a laser source onto the optical disk (optical coupling efficiency varying element 3; see also [0099]-[0105]), noting attenuation during operation of recording medium B, where attenuation during operation of optical recording medium A merely illustrates anticipation by Nishi).

For claim 2, Nishi teaches:

The optical pickup as set forth in claim 1 (104), wherein the attenuating means includes a polarization beam splitter (beam splitter 4, 215) disposed in an optical path between the laser source (2, 212) and the optical disk (102), and a polarization rotating element (optical coupling efficiency element 3, liquid crystal element 214) disposed between the laser source and the polarization beam splitter. Note that Nishi discloses the polarization effect on the light beam of elements 215 and 214 (see [0071]). Additionally, Nishi discloses use of a servo controller 109 to control the liquid crystal element 214, which indicates the liquid crystal element 214 is a rotating element.

For claim 3, Nishi teaches:

> The optical pickup as set forth in claim 2 (104), wherein the polarization rotating element is a liquid crystal element (215) with a liquid crystal layer (49; see [0154]) for generating a phase difference in the laser beam in response to applied electric field in the low-power operation mode (see [0156 – 0158]).

For claim 5, Nishi teaches:

> The optical pickup as set forth in claim 1 (104), wherein the attenuating means is a reflecting element (3) for reflecting part of incident light from the laser source, or an absorbing element (3) for absorbing part of incident light from the laser source (see [0132]).

For claim 6, Nishi teaches:

> The optical pickup as set forth in claim 5 (104), wherein the reflecting element or the absorbing element is a liquid crystal element with a liquid crystal layer (21) that serves as the reflecting element or the absorbing element in response to applied electric field in the low-power operation mode (see [0136 – 1037]).

For claim 7, Nishi teaches:

> The optical pickup as set forth in claim 1 (104), wherein the attenuating means includes at least a liquid crystal element with a liquid crystal layer (3, 215, 21), and the liquid crystal element serves to attenuate the incident laser beam on the optical disk in response to applied electric field to the liquid crystal layer in the low-power operation mode (see [0066]).

For claim 8, Nishi teaches:

An optical disk reproducing device (optical recording medium driving device 101) for reproducing information from an optical disk by projecting a laser beam on the optical disk (see Abstract, [0014]), including: an optical pickup (104) operable to reproduce information in a low-power operation mode in which a single-layer disk is reproduced or a disk is reproduced at a normal speed and a high-power operation mode in which a bi-layer disk is reproduced or a disk is reproduced at a double speed (see [0043]-[0045], [0090]-[0095] where the "low-power operation mode" limitation is met by operation of "optical recording medium B", the "high-power operation mode" limitation is met by operation of "optical recording medium A"); the optical pickup including attenuating means for attenuating, only in the low-power operation mode, a laser beam emitted by a laser source onto the optical disk ("optical coupling efficiency varying element 3"; see also [0099]-[0105]), noting attenuation during operation of recording medium B, where attenuation during operation of optical recording medium A merely illustrates anticipation by Nishi).

For claim 9, Nishi teaches:

The optical disk reproducing device as set forth in claim 8 (101), wherein: the optical disk reproducing device is operable to reproduce information from a single-layer disk and a bi-layer disk (see [0045], [0060]); and the optical pickup is operated in the low-power operation mode when reproducing information from

the single-layer disk, and the optical pickup is operated in the high-power operation mode when reproducing information from the bi-layer disk (see [0010]).

In [0010] of Nishi, it is disclosed that multi-layered optical recording media (optical disks) require 1.5 to 2 or more times as much power to record and reproduce information as single layer optical recording media. It is to be expected, then, that the optical head would use low power when reproducing information from a single layer disk, thus operating in a low-power mode. Likewise, it would be expected that the optical head would use high power when reproducing from a multi-layered disk, thus operating in a high-power mode.

For claim 10, Nishi teaches:

The optical disk reproducing device as set forth in claim 8 (101), wherein: the optical disk reproducing device is operable to reproduce information at a normal speed and at a double or faster speed (see [0044]); and the optical pickup is operated in the low-power operation mode when reproducing information at a normal speed, and the optical pickup is operated in the high-power operation mode when information is reproduced at a double or faster speed (see [0011]).

In [0011] of Nishi, it is disclosed that an increase in the velocity (speed) of an optical recording medium (optical disk) results in requiring a larger recording and reproducing operating power. It is to be expected, then, that the optical head would use low power when operating at a normal velocity (speed), thus operating in a low-power mode. Likewise, it would be expected that the optical head would

use high power when operating at an increased (faster) velocity (speed), thus operating in a high-power mode.

For claim 11, Nishi teaches:

The optical disk reproducing device as set forth in claim 9 (101), wherein: the optical disk reproducing device is operable to record information in the optical disk (see Abstract, [0014]); and the optical pickup is operated in the high-power operation mode when recording information (see [0006]).

In [0006] of Nishi, it is disclosed that operating in a recording mode requires about 5 to 20 times more power than operating in a reproducing mode. It is to be expected, then, that the optical head would use high power when reproducing, thus operating in a high-power mode.

For claim 12, Nishi teaches:

The optical disk reproducing device as set forth in claim 10 (101), wherein: the optical disk reproducing device is operable to record information in the optical disk (see Abstract, [0014]); and the optical pickup is operated in the high-power operation mode when recording information (see [0006]).

In [0006] of Nishi, it is disclosed that operating in a recording mode requires about 5 to 20 times more power than operating in a reproducing mode. It is to be expected, then, that the optical head would use high power when reproducing, thus operating in a high-power mode.

For claim 13, Nishi teaches:

The optical disk reproducing device (101) as set forth in claim 8, wherein the attenuating means includes: a polarization beam splitter (215) disposed in an optical path between the laser source (212) and the optical disk (102); and a liquid crystal element (214, 21) with a liquid crystal layer (49), disposed between the laser source (212) and the polarization beam splitter (215), for generating a phase difference in the laser beam in response to applied electric field in the low-power operation mode (see [0156 – 0158]).

For claim 14, Nishi teaches:

The optical disk reproducing device as set forth in claim 13 (101), further comprising: monitor means for detecting a quantity of the laser beam (219); and laser source power control means for controlling output of the laser source based on a result of detection by the monitor means (121), wherein the laser source power control means switches control operations between the low-power operation mode and the high-power operation mode (see [0074]).

Allowable Subject Matter

3. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to teach or suggest the transmittance of P polarized component of the laser beam that passes through the

polarization beam splitter in the low-power operation mode is 20% to 50% of that in the high-power operation mode.

Response to Arguments

4. Applicant's arguments filed March 7, 2007 in regards to claims 1-3 and 5-14 have been fully considered but they are not persuasive. Regarding applicant's argument that the claimed invention is a reproducing-only device, firstly, because the device Nishi is capable of both recording and reproducing, versus merely recording, the device of Nishi anticipates that of applicant. Secondly, claims 11 and 12 of the claimed invention state the invention is "operable to record information in the optical disk," thereby contradicting applicant's argument that the claimed invention is a reproducing-only device. Regarding applicant's argument in reference to the low and high power reproduction modes defined in the amendments, Nishi suggests operation requiring more power for a "multilayered optical disc, high linear velocity optical recording medium," thus meeting the amended definitions of low and high power reproduction modes (see [0090]-[0093]). Regarding applicant's argument that the attenuation means operates only in the low power operation mode, it is noted that the device of Nishi performs attenuation in the low power operation mode (operation of optical recording medium B [0101]. Again, because the device of Nishi is operable to perform attenuation both during the high power and low power operation modes, versus merely the low power operation mode, the device of Nishi anticipates that of applicant.

5. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., switching a liquid crystal element in accordance with an operation mode selected for reproducing and switching the output control modes of a laser diode in accordance with the switching of the liquid crystal element) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa (Brandi) Coleman whose telephone number is (571) 272-9081. The examiner can normally be reached on Mon-Thurs 8:30-6; 1st Fri off, 2nd Fri 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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VC

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PRIMARY EXAMINER